Xylenes

Safety Data Sheet

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SECTION 1 Identification

1.1. Product identifier

Product form	:	Mixture
Trade name	:	Xylenes
CAS-No.	:	1330-20-7
Formula	:	C8H10
BIG No	:	10942

1.2. Other means of identification

Synonyms	:	Xylene, Xylene Mixed Isomers, Mixed Xylenes, Xylene mixture of isomers, Stain Reducer
EC Index No. (Report)	:	601-022-00-9
EC-No.	:	215-535-7

1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture	:	This product is intented for use as a refinery feedstock, ful or for use in engineered processes. Use in other applications may result in higher exposures and require additional controls, such as local exhaust ventilation and personal protective equipment.
Recommended use	:	Industrial uses. Cleansing product. Chemical raw material. Solvent.
Restrictions on use	:	None known

1.4. Supplier's details

Corporate Office
The Whitaker Company
1557 Marietta Rd NW
Atlanta, Georgia 30318

TEL: 404-355-8220

1.5. Emergency phone number

Emergency number	:	**CHEMTREC 800-424-9300**

SECTION 2 Hazard Identification

2.1. Classification of the substance or mixture

GHS US classification

Flammable liquids, Category 3	H226
Acute toxicity (dermal), Category 4	H312
Acute toxicity (inhalation:dust,mist), Category 3	H332
Skin corrosion/irritation, Category 2	H315
Serious eye damage/eye irritation, Category 2	H319
Carcinogenicity, Category 2	H351
Reproductive toxicity, Category 2	H361
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	H335
Specific target organ toxicity — Repeated exposure, Category 2	H373
Aspiration hazard, Category 1	H304
Hazardous to the aquatic environment — Acute Hazard, Category 2	H401

Full text of H statements : see section 16

2.2. Label elements

GHS US labeling

Hazard pictograms (GHS US) :

Signal word (GHS US) : Danger

Hazard statements (GHS US) :
H226 - Flammable liquid and vapor
H304 - May be fatal if swallowed and enters airways
H312+H332 - Harmful in contact with skin or if inhaled
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H335 - May cause respiratory irritation
H351 - Suspected of causing cancer.
H361 - Suspected of damaging fertility or the unborn child
H373 - May cause damage to organs through prolonged or repeated exposure
H401 - Toxic to aquatic life

Precautionary statements (GHS US) :
P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 - Keep container tightly closed.
P240 - Ground/Bond container and receiving equipment.
P241 - Use explosion-proof equipment.
P242 - Use non-sparking tools.
P243 - Take action to prevent static discharges.
P260 - Do not breathe dust, fume, gas, mist, vapours, spray.
P261 - Avoid breathing dust, fume, gas, mist, vapours, spray.
P264 - Wash hands, forearms and face thoroughly after handling.
P271 - Use only outdoors or in a well-ventilated area.
P273 - Avoid release to the environment.
P280 - Wear protective gloves, protective clothing, eye protection, face protection, and hearing protection.
P301+P310 - If swallowed: Immediately call a poison center or doctor.
P302+P352 - If on skin: Wash with plenty of water.
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P308+P313 - If exposed or concerned: Get medical advice/attention.
P312 - Call a poison center or doctor if you feel unwell.
P314 - Get medical advice or attention if you feel unwell.
P321 - Specific treatment (see supplemental first aid instruction on this label).
P322 - Specific treatment (see supplemental first aid instruction on this label)
P331 - Do NOT induce vomiting.
P332+P313 - If skin irritation occurs: Get medical advice or attention.
P337+P313 - If eye irritation persists: Get medical advice or attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P370+P378 - In case of fire: Use appropriate media to extinguish.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P403+P235 - Store in a well-ventilated place. Keep cool.
P405 - Store locked up.
P501 - Dispose of contents and/or container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

2.4. Hazards not otherwise classified

No additional information available

2.5. Unknown acute toxicity

No additional information available

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	Conc.
Xylene (o,m,p isomers)	CAS-No.: 1330-20-7	55 – 98
Ethyl Benzene	CAS-No.: 100-41-4	10 – 19
Toluene	CAS-No.: 108-88-3	0 – 0.5

Full text of hazard classes and H-statements : see section 16

SECTION 4 First aid measures

4.1. Description of necessary first-aid measures

First-aid measures general : Call a physician immediately.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor/physician if you feel unwell.

First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. If skin irritation occurs: Get medical advice/attention.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Do not induce vomiting. Call a physician immediately.

4.2. Most important symptoms/effects, acute and delayed

Most important symptoms/ effects, acute and delayed : Abdominal pain. Nausea, vomiting. Aspiration may cause pulmonary edema and pneumonitis. Jaundice. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain. Edema. Prolonged exposure may cause chronic effects.

Indication of immediate medical attention and special treatment needed : Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed. This material, if aspirated into the lungs, may cause chemical pneumonitis; treat the affected person appropriately.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Other medical advice or treatment : Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media : Water (quick-acting extinguisher, reel); risk of puddle expansion. Water; risk of puddle expansion.

5.2. Specific hazards arising from the chemical

Fire hazard : Flammable liquid and vapor.
Vapor may cause flash fire. Vapors can flow along surfaces to distant ignition sources and flash back. Sensitive to static discharge.
Use water spray to cool unopened containers.
Explosion hazard : DIRECT EXPLOSION HAZARD: Gas/vapour explosive with air within explosion limits.
INDIRECT EXPLOSION HAZARD: May be ignited by sparks.
Hazardous decomposition products in case of fire : Upon combustion: CO and CO2 are formed.

5.3. Special protective equipment and precautions for fire-fighters

Precautionary measures fire : Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: seal off low-lying areas. Exposure to fire/heat: have neighbourhood close doors and windows.
Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material-damage.

For non-emergency personnel

Protective equipment : Gloves (EN 374). Face shield (EN 166). Protective clothing (EN 14605 or EN 13034).
Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin, eyes and clothing.

For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

Environmental precautions	:	If facility or operation has an "oil or hazardous substance contingency plan", activate its procedures. Stay upwind and away from spill. Wear appropriate protective equipment including respiratory protection as conditions warrant. Do not enter or stay in area unless monitoring indicates that it is safe to do so. Isolate hazard area and restrict entry to emergency crew. Flammable. Review Firefighting Measures, Section 5, before proceeding with clean up. Keep all sources of ignition (flames , smoking, flares, etc.) and hot surfaces away from release. Contain spill in smallest possible area. Recover as much product as possible (e.g. by vacuuming). Stop leak if it can be done without risk. Use water spray to disperse vapors. Spilled material may be absorbed by an appropriate absorbent, and then handled in accordance with environmental regulations. Prevent spilled material from entering sewers, storm drains, other unauthorized treatment or drainage systems and natural waterways. Contact fire authorities and appropriate federal, state and local agencies. If spill of any amount is made into or upon navigable waters, the contiguous zone, or adjoining shorelines, contact the: National Response Center at 1-800-424-8802. For highway or railways spills, contact Chemtrec at 1-800-424-9300.

6.2. Methods and materials for containment and cleaning up

For containment	:	Collect spillage. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak, if possible without risk.
Methods for cleaning up	:	Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.
Other information	:	Dispose of materials or solid residues at an authorized site. Never retueh spills in original container for re-use.

For further information refer to section 13

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	:	Do not handle until all safety precautions have been read and understood. Consult with applicable standards such as NFPA 30, 'Flammable and Combustible Liquids Code'. This product is highly flammable, and explosive vapor/air mixtures may be formed. Eliminate sources of ignition. Avoid spark promoters. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapors may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Use only outdoors or in a well-ventilated area.
Hygiene measures	:	Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.
Additional hazards when processed	:	Not expected to present a significant hazard under anticipated conditions of normal use.

7.2. Conditions for safe storage, including incompatibilities

Technical measures	:	Ground/bond container and receiving equipment.
Storage conditions	:	Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.
Storage area	:	Meet the legal requirements. Keep container in a well-ventilated place. Fireproof storeroom. Provide for a tub to collect spills. Provide the tank with earthing.
Information on mixed storage	:	KEEP SUBSTANCE AWAY FROM: combustible materials. oxidizing agents. (strong) acids. halogens. highly flammable materials.
Heat-ignition	:	KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.
Special rules on packaging	:	SPECIAL REQUIREMENTS: closing. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
Packaging materials	:	Store always product in container of same material as original container.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

Xylenes (1330-20-7)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Xylene, mixed isomers (Dimethylbenzene)
ACGIH OEL TWA	20 ppm
Remark (ACGIH)	TLV® Basis: URT & eye irr; hematologic eff; ototoxycity (for mixtures containing p-xylene); CNS impair. Notations: OTO (for mixtures containing p-xylene); A4 (Not classifiable as a Human Carcinogen); BEI
Regulatory reference	ACGIH 2024
USA - ACGIH - Biological Exposure Indices	
Local name	Xylenes (technical or commercial grade)
BEI (BLV)	0.3 g/g Kreatinin Parameter: Methylhippuric acids (The determinants refer to the total of all isomers of methylhippuric acids) - Medium: urine - Sampling time: End of shift
Remark	Commercial or technical grade xylenes consist of mixtures of isomers and significant amounts of ethyl benzene as indicated under "Properties." Because ethyl benzene is known to reduce the metabolism of xylenes to methylhippuric acids, the BEI applies to technical or commercial grades of xylenes only. The determinants refer to the total of all isomers of methylhippuric acids
Regulatory reference	ACGIH 2024
USA - OSHA - Occupational Exposure Limits	
Local name	Xylenes (o-, m-, p-isomers)
OSHA PEL TWA	435 mg/m³
	100 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

Ethyl Benzene (100-41-4)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Ethyl benzene
ACGIH OEL TWA	20 ppm
Remark (ACGIH)	URT irr; kidney dam (nephropathy)
USA - OSHA - Occupational Exposure Limits	
Local name	Ethyl benzene
OSHA PEL TWA	435 mg/m³
	100 ppm

Toluene (108-88-3)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Toluene
ACGIH OEL TWA	20 ppm
Remark (ACGIH)	Visual impair; female repro;

Toluene (108-88-3)	
Regulatory reference	ACGIH 2024
USA - ACGIH - Biological Exposure Indices	
Local name	Toluene
BEI (BLV)	0.3 mg/g Kreatinin Parameter: o-Cresol (with hydrolysis) - Medium: urine - Sampling time: End of shift - Notations: B 0.03 mg/l Parameter: Toluene - Medium: urine - Sampling time: End of shift 0.02 mg/l Parameter: Toluene - Medium: blood - Sampling time: Prior to last shift of workweek
Regulatory reference	ACGIH 2024
USA - OSHA - Occupational Exposure Limits	
Local name	Toluene
OSHA PEL TWA	200 ppm
OSHA PEL (Ceiling)	300 ppm
Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift	500 ppm 10 mins.
Remark (OSHA)	(2) See Table Z-2.
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-2

o-xylene (95-47-6)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	20 ppm

m-Xylene (108-38-3)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	20 ppm

p-xylene (106-42-3)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	20 ppm

8.2. Appropiate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station. Provide eyewash station and safety shower.
Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment

Personal protective equipment:
Wear recommended personal protective equipment.

Materials for protective clothing:
Excellent resistance: Polyvinylalcohol (PVA). Viton. fluor rubber. LLDPE laminated film. Good resistance: Tetrafluoroethylene. Poor resistance: Nitrile rubber. butyl rubber. Natural rubber. neoprene (chloroprene rubber). Polyethylene

Hand protection:
Protective gloves. Chemical resistant gloves are recommended.

Eye protection:
Safety glasses. Use goggles or face-shield if there is a potential for splashing.

Skin and body protection:
Wear suitable protective clothing. Chemical resistant. Impervious.

Respiratory protection:
[In case of inadequate ventilation] wear respiratory protection.

Personal protective equipment symbol(s):

SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	:	Liquid
Appearance	:	Liquid.
Color	:	Colorless to light yellow
Odor	:	Aromatic odor
Odor threshold	:	No data available
pH	:	No data available in the literature
Melting/ Freezing point	:	-47.22 °C / -53 °F
Initial Boiling point	:	136 - 142 °C / 277-288 °F
Flash point	:	79 °F
Evaporation rate (Butyl Acetate)	:	0.76
Flammability (solid, gas)	:	Not applicable.
Vapor pressure	:	6.5 – 8.7 hPa (20 °C)
Vapor density	:	3.66
Relative density/ Specific gravity	:	0.86 – 0.88 (25 °C)
Relative density of saturated gas/air mixture	:	1.02
Density	:	> 0.87 g/cm³
Solubility	:	Insoluble in water.
Partition coefficient n-octanol/water (Log Pow)	:	3.2 (Read-across, 20 °C)
Auto-ignition temperature	:	> 870 °F
Decomposition temperature	:	No data available in the literature
Viscosity, kinematic	:	< 0.678 mm²/s
Viscosity, dynamic	:	0.59 cP
Explosion limits	:	0.9 - 1.1 - 6.7 - 7 vol % Lower explosion limit: 0.9 – 1.1 vol % Upper explosion limit: 6.7 – 7 vol %
Explosive properties	:	Not classified.
Oxidizing properties	:	Not classified.
Particle characteristics	:	Particle size : Not applicable (liquid)

9.2. Data relevant with regard to physical hazard classes (supplemental)

Minimum ignition energy	:	0.2 mJ
Specific conductivity	:	0.1 pS/m
Saturation concentration	:	29 – 37 g/m³ (20 °C)
VOC content	:	100 %

Other properties : Gas/vapour heavier than air at 20°C. Clear. Physical properties depending on the composition. Slightly volatile. May generate electrostatic charges.

SECTION 10 Stability and reactivity

10.1. Reactivity

Flammable liquid and vapor.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11 Toxicological information

11.1. Likely routes of exposure

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Harmful in contact with skin.
Acute toxicity (inhalation) : Inhalation:dust,mist.

Xylenes (1330-20-7)	
LD50 oral rat	> 4000 mg/kg body weight (Equivalent or similar to EU Method B.1, Rat, Female, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	> 12126 mg/kg body weight (24 h, Rabbit, Male, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	29.09 mg/l (Equivalent or similar to EU Method B.2, 4 h, Rat, Male, Experimental value, Inhalation (vapours), 14 day(s))
ATE US (dermal)	1100 mg/kg body weight
ATE US (vapors)	29.09 mg/l/4h
ATE US (dust, mist)	1.5 mg/l/4h

Ethyl Benzene (100-41-4)	
LD50 oral rat	3500 mg/kg (Rat; Other; Experimental value)
LD50 dermal rabbit	15415 mg/kg (Rabbit; Literature study; Other; 15432 mg/kg; Rabbit; Experimental value)
LC50 Inhalation - Rat	17.8 mg/l/4h (Rat; Literature study)
LC50 Inhalation - Rat [ppm]	4000 ppm/4h (Rat; Literature study)
ATE US (oral)	3500 mg/kg body weight

Ethyl Benzene (100-41-4)	
ATE US (dermal)	15415 mg/kg body weight
ATE US (gases)	4000 ppmV/4h
ATE US (vapors)	17.8 mg/l/4h
ATE US (dust, mist)	1.5 mg/l/4h

Toluene (108-88-3)	
LD50 oral rat	5580 mg/kg body weight (Equivalent or similar to EU Method B.1, Rat, Male, Experimental value, Oral, 7 day(s))
LD50 dermal rabbit	> 5000 mg/kg body weight (24 h, Rabbit, Male, Experimental value, Dermal)
LC50 Inhalation - Rat	28.1 mg/l air (Equivalent or similar to OECD 403, 4 h, Rat, Male / female, Experimental value, Inhalation (vapours))
ATE US (oral)	5580 mg/kg body weight

o-xylene (95-47-6)	
LD50 oral rat	≥ 3523 mg/kg body weight (Equivalent or similar to EU Method B.1, Rat, Male / female, Experimental value of similar product, Oral, 14 day(s))
LD50 dermal rabbit	12126 mg/kg body weight (24 h, Rabbit, Male, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	27.12 mg/l (EPA OPP 81-3: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value of similar product, Inhalation (vapours), 14 day(s))
ATE US (oral)	3523 mg/kg body weight
ATE US (dermal)	12126 mg/kg body weight
ATE US (gases)	4500 ppmV/4h
ATE US (vapors)	11 mg/l/4h
ATE US (dust, mist)	1.5 mg/l/4h

m-Xylene (108-38-3)	
LD50 oral rat	> 3523 mg/kg body weight (Equivalent or similar to EU Method B.1, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	12126 mg/kg body weight (24 h, Rabbit, Male, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	27.124 mg/l (EPA OPP 81-3: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Inhalation (vapours), 14 day(s))
ATE US (oral)	5011 mg/kg body weight
ATE US (dermal)	1100 mg/kg body weight
ATE US (gases)	4500 ppmV/4h
ATE US (vapors)	11 mg/l/4h
ATE US (dust, mist)	1.5 mg/l/4h

p-xylene (106-42-3)	
LD50 oral rat	3523 – 4000 mg/kg body weight (Equivalent or similar to EU Method B.1, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	12126 mg/kg body weight (24 h, Rabbit, Male, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	27.12 mg/l (EPA OPP 81-3: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Inhalation (vapours), 14 day(s))

p-xylene (106-42-3)	
ATE US (oral)	3523 mg/kg body weight
ATE US (dermal)	12126 mg/kg body weight
ATE US (gases)	4500 ppmV/4h
ATE US (vapors)	11 mg/l/4h
ATE US (dust, mist)	1.5 mg/l/4h

Skin corrosion/irritation : Causes skin irritation.
pH: No data available in the literature

Toluene (108-88-3)	
pH	No data available in the literature

o-xylene (95-47-6)	
pH	No data available in the literature

p-xylene (106-42-3)	
pH	No data available in the literature

Serious eye damage/irritation : Causes serious eye irritation.
pH: No data available in the literature

Toluene (108-88-3)	
pH	No data available in the literature

o-xylene (95-47-6)	
pH	No data available in the literature

p-xylene (106-42-3)	
pH	No data available in the literature

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Suspected of causing cancer.

Xylenes (1330-20-7)	
IARC group	3 - Not classifiable

Ethyl Benzene (100-41-4)	
IARC group	2B - Possibly carcinogenic to humans

Toluene (108-88-3)	
IARC group	3 - Not classifiable

Reproductive toxicity : Suspected of damaging fertility or the unborn child.

STOT-single exposure : May cause respiratory irritation.

Toluene (108-88-3)	
STOT-single exposure	May cause drowsiness or dizziness.

STOT-repeated exposure : May cause damage to organs through prolonged or repeated exposure.

Ethyl Benzene (100-41-4)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Toluene (108-88-3)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard : May be fatal if swallowed and enters airways.

Xylenes (1330-20-7)	
Viscosity, kinematic	< 0.678 mm²/s

Ethyl Benzene (100-41-4)	
Viscosity, kinematic	0.782 mm²/s

Toluene (108-88-3)	
Viscosity, kinematic	No data available in the literature

o-xylene (95-47-6)	
Viscosity, kinematic	0.864 mm²/s (25 °C, Calculated)

m-Xylene (108-38-3)	
Viscosity, kinematic	0.672 mm²/s

p-xylene (106-42-3)	
Viscosity, kinematic	0.75 mm²/s (20 °C)

Potential Adverse human health effects and symptoms : Practically non-toxic if swallowed (LD50 oral, rat > 2000 mg/kg). Causes skin irritation. Harmful in contact with skin. Harmful if inhaled. Caution! Substance is absorbed through the skin.

Symptoms/effects after inhalation : Harmful if inhaled. May cause respiratory irritation.

Symptoms/effects after skin contact : Harmful in contact with skin. Irritation.

Symptoms/effects after eye contact : Eye irritation.

Symptoms/effects after ingestion : Risk of lung edema.

Chronic symptoms : Dry skin. Itching.

SECTION 12 Ecological information

12.1. Ecotoxicity

Ecology - general : Toxic to aquatic life.

Ecology - air : Not included in the list of substances which may contribute to the greenhouse effect (IPCC). Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 2024/573). Photolysis in the air. Not classified as dangerous for the ozone layer (Regulation (EC) No 2024/590).

Ecology - water : Toxic to crustacea (Daphnia). Toxic to fishes. Groundwater pollutant. Fouling to shoreline. No inhibition of activated sludge. Toxic to algae.

Hazardous to the aquatic environment, short–term (acute) : Toxic to aquatic life.

Hazardous to the aquatic environment, long–term (chronic) : Not classified

Xylenes (1330-20-7)	
LC50 - Fish [1]	2.6 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Oncorhynchus mykiss, Static renewal, Fresh water, Read-across, Lethal)
ErC50 algae	4.4 mg/l (OECD 201: Alga, Growth Inhibition Test, 73 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)

Ethyl Benzene (100-41-4)	
LC50 - Fish [2]	4.2 mg/l (LC50; OECD 203: Fish, Acute Toxicity Test; 96 h; Salmo gairdneri; Semi-static system; Fresh water; Experimental value)

Toluene (108-88-3)	
LC50 - Fish [1]	5.5 mg/l (96 h, Oncorhynchus kisutch, Flow-through system, Fresh water, Experimental value, Lethal)

o-xylene (95-47-6)	
LC50 - Fish [1]	2.6 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Oncorhynchus mykiss, Static system, Fresh water, Experimental value, Lethal)
ErC50 algae	4.36 mg/l (OECD 201: Alga, Growth Inhibition Test, 73 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)

m-Xylene (108-38-3)	
LC50 - Fish [1]	2.6 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Oncorhynchus mykiss, Static renewal, Fresh water, Experimental value, Lethal)
EC50 72h - Algae [1]	4.9 mg/l (OECD 201: Alga, Growth Inhibition Test, Selenastrum capricornutum, Static system, Fresh water, Experimental value)

p-xylene (106-42-3)	
LC50 - Fish [1]	2.6 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Oncorhynchus mykiss, Static renewal, Fresh water, Experimental value, Lethal)
ErC50 algae	4.36 mg/l (OECD 201: Alga, Growth Inhibition Test, 73 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)

12.2. Persistence and degradability

Xylenes (1330-20-7)	
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.

Ethyl Benzene (100-41-4)	
Persistence and degradability	Readily biodegradable in water, Biodegradable in the soil, Low potential for adsorption in soil.
Biochemical oxygen demand (BOD)	1.44 g O_2/g substance (20d.)
Chemical oxygen demand (COD)	2.1 g O_2/g substance
ThOD	3.17 g O_2/g substance
BOD (% of ThOD)	45.4 (20 days)

Toluene (108-88-3)	
Persistence and degradability	Readily biodegradable in water.
Biochemical oxygen demand (BOD)	2.15 g O_2/g substance
Chemical oxygen demand (COD)	2.52 g O_2/g substance
ThOD	3.13 g O_2/g substance

o-xylene (95-47-6)	
Persistence and degradability	Biodegradable in the soil, Readily biodegradable in water.

m-Xylene (108-38-3)	
Persistence and degradability	Biodegradable in the soil, Readily biodegradable in water.

m-Xylene (108-38-3)	
Biochemical oxygen demand (BOD)	2.53 g O_2/g substance
Chemical oxygen demand (COD)	2.63 g O_2/g substance
ThOD	3.1 g O_2/g substance

p-xylene (106-42-3)	
Persistence and degradability	Biodegradable in the soil, Readily biodegradable in water.
Biochemical oxygen demand (BOD)	1.4 g O_2/g substance
Chemical oxygen demand (COD)	2.56 g O_2/g substance
ThOD	3.125 g O_2/g substance

12.3. Bioaccumulative potential

Xylenes (1330-20-7)	
BCF - Fish [1]	7.2 – 26 (56 day(s), Oncorhynchus mykiss, Flow-through system, Fresh water, Read-across)
Partition coefficient n-octanol/water (Log Pow)	3.2 (Read-across, 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

Ethyl Benzene (100-41-4)	
BCF - Fish [1]	1 (BCF; Other; 6 weeks; Oncorhynchus kisutch; Flow-through system; Salt water; Literature study)
BCF - Fish [2]	15 – 79 (BCF)
BCF - Other aquatic organisms [1]	4.68 (BCF)
Partition coefficient n-octanol/water (Log Pow)	3.15 (Experimental value; 3.6; Experimental value; EU Method A.8: Partition Coefficient; 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

Toluene (108-88-3)	
BCF - Fish [1]	90 (3 day(s), Leuciscus idus, Static renewal, Fresh water, Experimental value, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	2.73 (Experimental value, 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

o-xylene (95-47-6)	
BCF - Fish [1]	7.2 – 25.9 (56 day(s), Oncorhynchus mykiss, Flow-through system, Fresh water, Experimental value)
Partition coefficient n-octanol/water (Log Pow)	3.15 (Experimental value, 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

m-Xylene (108-38-3)	
BCF - Fish [1]	4.9 – 25.9 (56 day(s), Oncorhynchus mykiss, Flow-through system, Fresh water, Experimental value)
Partition coefficient n-octanol/water (Log Pow)	3.15 (Experimental value, 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

p-xylene (106-42-3)	
BCF - Fish [1]	< 25.9 (56 day(s), Oncorhynchus mykiss, Flow-through system, Fresh water, Experimental value)

p-xylene (106-42-3)	
Partition coefficient n-octanol/water (Log Pow)	3.15 (Experimental value, 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

12.4. Mobility in soil

Xylenes (1330-20-7)	
Surface tension	28.01 – 29.76 mN/m (25 °C)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.7 (log Koc, Equivalent or similar to OECD 121, Read-across)
Ecology - soil	Low potential for adsorption in soil. May be harmful to plant growth, blooming and fruit formation.

Ethyl Benzene (100-41-4)	
Surface tension	0.029 N/m
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	log Koc,PCKOCWIN v1.66; 2.71; Calculated value; Koc; PCKOCWIN v1.66; 517.8; Calculated value

Toluene (108-88-3)	
Surface tension	27.73 mN/m (25 °C, 0.05 %)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.3 (log Koc, Calculated value)
Ecology - soil	Low potential for adsorption in soil.

o-xylene (95-47-6)	
Surface tension	29.76 mN/m (25 °C)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.73 (log Koc, Equivalent or similar to OECD 121, Experimental value)
Ecology - soil	Low potential for adsorption in soil. May be harmful to plant growth, blooming and fruit formation.

m-Xylene (108-38-3)	
Surface tension	28.47 mN/m (25 °C)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.73 (log Koc, Equivalent or similar to OECD 121, Experimental value)
Ecology - soil	Low potential for adsorption in soil. May be harmful to plant growth, blooming and fruit formation.

p-xylene (106-42-3)	
Surface tension	28.01 mN/m (25 °C)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.73 (log Koc, Equivalent or similar to OECD 121, Experimental value)
Ecology - soil	Low potential for adsorption in soil. May be harmful to plant growth, blooming and fruit formation.

12.5. Other adverse effects

Ozone : Not classified
Fluorinated greenhouse gases : No

SECTION 13 Disposal considerations

Regional waste regulation	:	Disposal must be done according to official regulations.
Waste treatment methods	:	Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	:	Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	:	Disposal must be done according to official regulations.
Additional information	:	Flammable vapors may accumulate in the container. Do not re-use empty containers.

SECTION 14 Transport information

14.1. UN number

UN-No.(DOT)	:	UN1307
UN-No. (IMDG)	:	1307
UN-No. (IATA)	:	1307

14.2. UN Proper Shipping Name

Proper Shipping Name (DOT)	:	Xylenes
Proper Shipping Name (IMDG)	:	xylenes
Proper Shipping Name (IATA)	:	Xylenes

14.3. Transport hazard class(es)

DOT

Transport hazard class(es) (DOT)	:	3
Hazard labels (DOT)	:	3

IMDG

Transport hazard class(es) (IMDG)	:	3
Hazard labels (IMDG)	:	3

IATA

Transport hazard class(es) (IATA)	:	3
Hazard labels (IATA)	:	3

14.4. Packing group

Packing group (DOT)	:	III
Packing group (IMDG)	:	III
Packing group (IATA)	:	III

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

DOT

UN-No.(DOT) : UN1307

DOT Special Provisions (49 CFR 172.102) : B1 - If the material has a flash point at or above 38 C (100 F) and below 93 C (200 F), then the bulk packaging requirements of 173.241 of this subchapter are applicable. If the material has a flash point of less than 38 C (100 F), then the bulk packaging requirements of 173.242 of this subchapter are applicable.
IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).
T2 - 1.5 178.274(d)(2) Normal..... 178.275(d)(3)
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = 97 / 1 + a (tr - tf) Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.

DOT Packaging Exceptions (49 CFR 173.xxx) : 150

DOT Packaging Non Bulk (49 CFR 173.xxx) : 203

DOT Packaging Bulk (49 CFR 173.xxx) : 242

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 60 L

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 220 L

DOT Vessel Stowage Location : A - The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel and on a passenger vessel.

IMDG

Transport regulations (IMDG) : Subject to the provisions

EmS-No. (Fire) : F-E - FIRE SCHEDULE Echo - NON-WATER-REACTIVE FLAMMABLE LIQUIDS

EmS-No. (Spillage) : S-D - SPILLAGE SCHEDULE Delta - FLAMMABLE LIQUIDS

IATA

Transport regulations (IATA) : Subject to the provisions

SECTION 15 Regulatory information

15.1. Federal regulations

Xylenes (1330-20-7)	
Subject to reporting requirements of United States SARA Section 313 Listed on EPA Hazardous Air Pollutant (HAPS)	
CERCLA RQ	100 lb

Xylenes (1330-20-7)	
SARA Section 311/312 Hazard Classes	Physical hazard - Flammable (gases, aerosols, liquids, or solids) Health hazard - Acute toxicity (any route of exposure) Health hazard - Aspiration hazard Health hazard - Carcinogenicity Health hazard - Respiratory or skin sensitization Health hazard - Reproductive toxicity Health hazard - Serious eye damage or eye irritation Health hazard - Skin corrosion or Irritation Health hazard - Specific target organ toxicity (single or repeated exposure)

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.		
Ethyl Benzene	CAS-No. 100-41-4	10 – 19%
Toluene	CAS-No. 108-88-3	0 – 0.5%
o-xylene	CAS-No. 95-47-6	5 – 15%
m-Xylene	CAS-No. 108-38-3	35 – 46%
p-xylene	CAS-No. 106-42-3	10 – 20%

Ethyl Benzene (100-41-4)	
Listed on EPA Hazardous Air Pollutant (HAPS)	
CERCLA RQ	1000 lb

Toluene (108-88-3)	
Listed on EPA Hazardous Air Pollutant (HAPS)	
CERCLA RQ	1000 lb

o-xylene (95-47-6)	
Listed on EPA Hazardous Air Pollutant (HAPS)	
CERCLA RQ	1000 lb

m-Xylene (108-38-3)	
Listed on EPA Hazardous Air Pollutant (HAPS)	
CERCLA RQ	1000 lb

p-xylene (106-42-3)	
Listed on EPA Hazardous Air Pollutant (HAPS)	
CERCLA RQ	100 lb

15.2. International regulations

CANADA

Xylenes (1330-20-7)

Listed on the Canadian DSL (Domestic Substances List)

Ethyl Benzene (100-41-4)

Listed on the Canadian DSL (Domestic Substances List)

Toluene (108-88-3)

Listed on the Canadian DSL (Domestic Substances List)

o-xylene (95-47-6)

Listed on the Canadian DSL (Domestic Substances List)

m-Xylene (108-38-3)

Listed on the Canadian DSL (Domestic Substances List)

p-xylene (106-42-3)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

Ethyl Benzene (100-41-4)

Listed on IARC (International Agency for Research on Cancer)

Toluene (108-88-3)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

15.3. State regulations

Xylenes (1330-20-7)

State or local regulations	U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

WARNING: This product can expose you to chemicals including Ethyl Benzene , which is known to the State of California to cause cancer, and Toluene, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Component	State or local regulations
Ethyl Benzene (100-41-4)	U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List

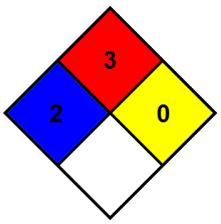
Component	State or local regulations
Toluene(108-88-3)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
o-xylene (95-47-6)	U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
m-Xylene(108-38-3)	U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
p-xylene (106-42-3)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16 Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Revision date : 6/24/2025
Issue date : 5/4/2018

Full text of hazard classes and H-statements	
H225	Highly flammable liquid and vapor
H226	Flammable liquid and vapor
H304	May be fatal if swallowed and enters airways
H312	Harmful in contact with skin
H315	Causes skin irritation
H319	Causes serious eye irritation
H332	Harmful if inhaled
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H351	Suspected of causing cancer.
H361	Suspected of damaging fertility or the unborn child
H373	May cause damage to organs through prolonged or repeated exposure
H401	Toxic to aquatic life

NFPA health hazard : 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.
NFPA fire hazard : 3 - Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions.
NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



Safety Data Sheet (SDS), USA

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. Please be advised revisions to the Safety Data Sheet (SDS) may require a label update. In no event shall The Whitaker Company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if The Whitaker Company has been advised of the possibility of such damages. The vendor assumes no responsibility for injury or damages resulting from the inappropriate alteration or manipulation of this SDS and its contents from that originally submitted by The Whitaker Company.